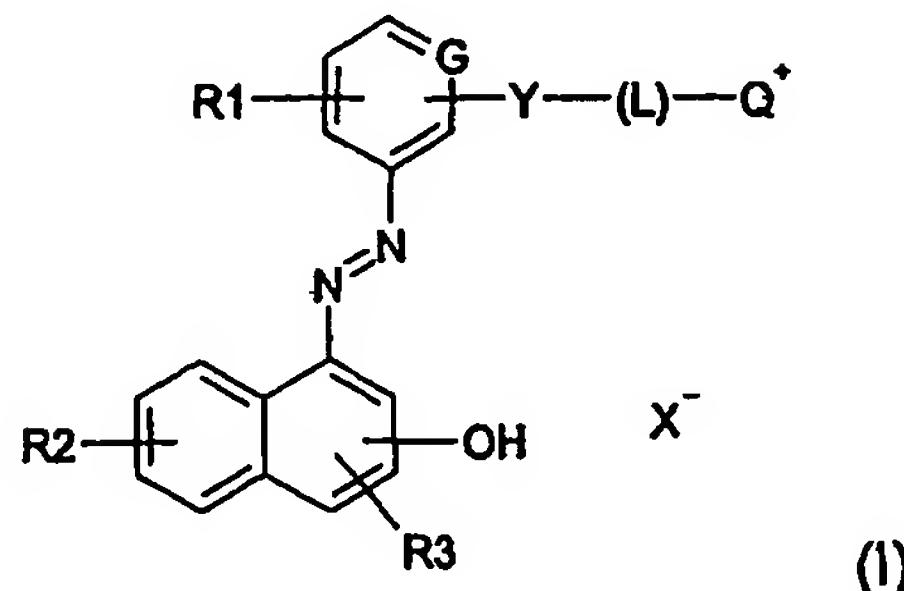


## CLAIMS

### 1. Cationic naphthyldiazo dyes of general formula (I)



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wherein

R1 stands for a hydrogen atom, halogen atom, straight-chain or branched (C<sub>1</sub>-C<sub>4</sub>)-alkyl group, straight-chain or branched (C<sub>1</sub>-C<sub>4</sub>)-alkoxy group, phenyl group or (C<sub>2</sub>-C<sub>4</sub>)-hydroxyalkyl group;

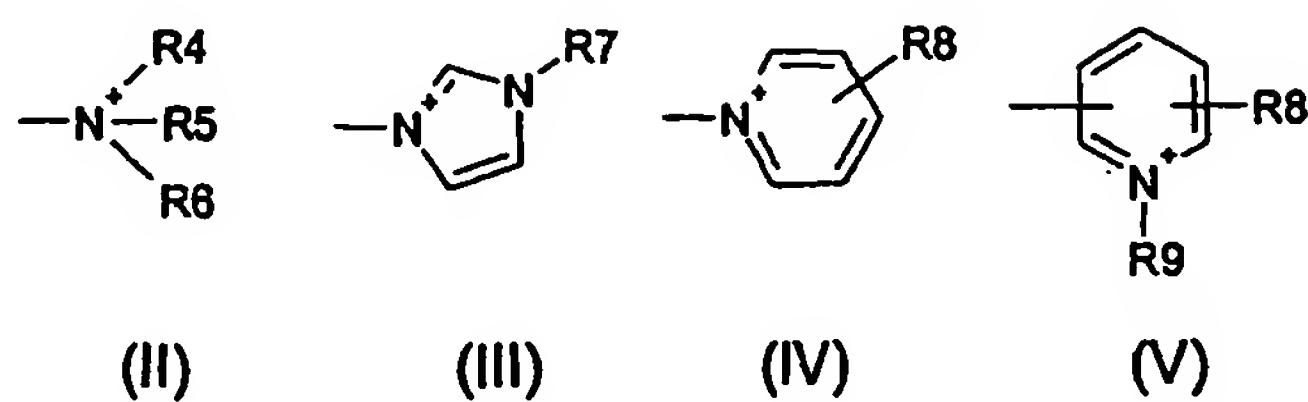
10 R2 and R3 can be equal or different and independently of each other stand for a hydrogen atom, hydroxyl group, amino group, acetylamino group, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy group, (C<sub>2</sub>-C<sub>4</sub>)-hydroxyalkoxy group, (C<sub>3</sub>-C<sub>6</sub>)-di- or polyhydroxyalkoxy group, -COOR group, -NRR' group or -CONRR' group, wherein R and R' can be equal or different and stand for a hydrogen atom, a straight-chain or branched (C<sub>1</sub>-C<sub>6</sub>)-alkyl group or a hydroxyethyl group, or R and R' together with the nitrogen atom to which they are attached form a heterocycle with at least four ring members optionally containing other heteroatoms and R and R' and the afore-described heterocycle possibly being substituted with an alkyl group, alkoxy group, hydroxyalkyl group or aminoalkyl group;

15 G stands for a nitrogen atom or a methine group (CH);

Y stands for an oxygen atom, or an N-(C<sub>1</sub>-C<sub>4</sub>)-alkyl group;

L represents a bridging group and stands for a straight-chain or branched (C<sub>1</sub>-C<sub>14</sub>)-alkylene group which optionally can be interrupted by one or more heteroatoms, the bridging group optionally being substituted with one or more hydroxyl groups, monohydroxy-(C<sub>2</sub>-C<sub>6</sub>)-alkyl groups, polyhydroxy-(C<sub>2</sub>-C<sub>6</sub>)-alkyl groups or (C<sub>1</sub>-C<sub>6</sub>)-alkoxy groups;

**Q<sup>+</sup>** stands for a saturated cationic group of formula (II) or an unsaturated cationic group of formulas (III) to (V)



5 wherein

R4 to R6 can be equal or different and independently of each other denote a straight-chain or branched (C<sub>1</sub>-C<sub>6</sub>)-alkyl group, (C<sub>2</sub>-C<sub>4</sub>)-hydroxyalkyl group, (C<sub>3</sub>-C<sub>6</sub>)-dihydroxyalkyl group, (C<sub>3</sub>-C<sub>6</sub>)-polyhydroxyalkyl group or (C<sub>1</sub>-C<sub>6</sub>)-alkoxy-(C<sub>1</sub>-C<sub>4</sub>)-alkyl group, wherein two of the R4 to R6 groups together with the nitrogen atom to which they are attached form a five-membered or six-membered heterocycle optionally interrupted by one or more heteroatoms such as an oxygen atom, sulfur atom or nitrogen atom and optionally bearing other substituents, for example a halogen atom, hydroxyl group, amino group, straight-chain or branched (C<sub>1</sub>-C<sub>6</sub>)-alkyl group, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy group, (C<sub>1</sub>-C<sub>6</sub>)-alkoxy-(C<sub>1</sub>-C<sub>4</sub>)-alkyl group or hydroxyethyl group;

10 R7 stands for a straight-chain or branched (C<sub>1</sub>-C<sub>8</sub>)-alkyl group, allyl group, vinyl group, hydroxyethyl group or benzyl group;

R8 stands for a hydrogen atom, straight-chain or branched (C<sub>1</sub>-C<sub>9</sub>)-alkyl group, amino group, di-(C<sub>1</sub>-C<sub>6</sub>)-alkylamino group or pyrrolidino group;

15 R9 stands for a straight-chain or branched (C<sub>1</sub>-C<sub>8</sub>)-alkyl group, allyl group, vinyl group, hydroxyethyl group, dihydroxypropyl group or benzyl group, and X<sup>-</sup> stands for an anion.

2. Dyes of formula (I) as defined in claim 1, characterized in that

25 R1 stands for a hydrogen atom, a chlorine atom or a methyl group, R2 and R3 are equal or different and independently of each other stand for hydrogen, a hydroxyl group, methoxy group, -NRR' group or -CONRR' group wherein R and R' can be equal or different and stand for a hydrogen atom, a me-

- thyl group or a hydroxyethyl group, or **R** and **R'** together with the nitrogen atom to which they are attached form a heterocycle with five or six ring members;
- G** stands for a nitrogen atom or a methine group (CH);
- Y** stands for oxygen or an N-methyl group;
- 5   **L** stands for a straight-chain (C<sub>2</sub>-C<sub>4</sub>)-bridging group;
- Q<sup>+</sup>** stands for a saturated cationic group of formula (II) or an unsaturated cationic group of formulas (III) to (V), the **R4** to **R6** groups possibly being equal or different and independently of each other denote a straight-chain (C<sub>1</sub>-C<sub>3</sub>)-alkyl group, a hydroxyethyl group or a methoxyethyl group, or two of the R4 to R6 groups together
- 10   with the nitrogen atom to which they are attached form a five-membered or six-membered heterocycle;
- R7** stands for a methyl group or hydroxyethyl group;
- R8** stands for a hydrogen atom, methyl group, dimethylamino group or pyrrolidino group;
- 15   **R9** stands for a methyl group, ethyl group or hydroxyethyl group, and
- X<sup>-</sup>** stands for a chloride anion, bromide anion or methylsulfate anion.

3.   Dyes of formula (I) as defined in claim 1 or 2, characterized in that they are selected from among 2-{2-[(2-hydroxy-1-naphthyl)diazaryl]phenoxy}-N,N,N-trimethylethanaminium methylsulfate, 2-{2-[(4-hydroxy-1-naphthyl)diazaryl]phenoxy}-N,N,N-trimethylethanaminium chloride, 2-(2-{2-[(2-hydroxy-1-naphthyl)diazaryl]phenoxy}ethyl)-1-methylpyridinium methylsulfate, 2-{2-[(2,7-dihydroxy-1-naphthyl)diazaryl]phenoxy}-N,N,N-trimethylethanaminium chloride, 4-(2-{2-[(2-hydroxy-1-naphthyl)-diazaryl]phenoxy}ethyl)-4-methylmorpholin-4-ium chloride, 2-[{(2-hydroxy-7-(methyloxy)-1-naphthalenyl)diazaryl}phenyl]oxy]-N,N,N-trimethylethanaminium chloride, 2-[{4-[(2-hydroxy-1-naphthalenyl)diazaryl]phenyl}(methyl)amino]-N,N,N-trimethylethanaminium methylsulfate, 2-[{2-[(2-hydroxy-1-naphthalenyl)diazaryl]phenyl}(methyl)amino-N,N,N-trimethylethanaminium methylsulfate, 2-[{2-(4-hydroxy-1-naphthalenyl)diazaryl]phenyl}(methyl)amino]-N,N,N-trimethyl-30   ethanaminium methylsulfate, 2-({5-[(2-hydroxy-1-naphthyl)diazaryl]-2-pyridinyl}-

- oxy)-N,N,N-trimethylethanaminium chloride, 2-{3-[(2-hydroxy-1-naphthyl)diazenyl]-2-pyridinyl}oxy)-N,N,N-trimethylethanaminium chloride, 2-{3-[(4-hydroxy-1-naphthyl)diazenyl]-2-pyridinyl}oxy)-N,N,N- trimethylethanaminium chloride, 2-{3-[(2-hydroxy-1-naphthyl)diazenyl]phenoxy}-N,N,N-trimethylethanaminium chloride,  
5 3-(2-{2-[(2-hydroxy-1-naphthyl)diazenyl]phenoxy}ethyl)-1-methyl-1H-imidazol-3-ium chloride, 2-{2-[(2,4-dihydroxy-1-naphthalenyl)diazenyl]phenyl}oxy)-N,N,N-trimethylethanaminium chloride and 2-{[2-({2-hydroxy-3-[(phenylamino)carbonyl]-1-naphthalenyl}diazenyl)phenyl]oxy}-N,N,N-trimethylethanaminium chloride.
- 10 4. Agent for coloring keratin fibers, characterized in that it contains at least one dye of formula (I) as defined in one of claims 1 to 3.
- 15 5. Agent as defined in claim 4, characterized in that it contains the dye of formula (I) in a total amount from 0.01 to 10 weight percent.
6. Agent as defined in claim 4 or 5, characterized in that it contains other dyes besides the dyes of formula (I).
- 20 7. Agent as defined in claim 6, characterized in that the other dye is selected from among 3-[(4,5-dihydro-3-methyl-5-keto-1-phenyl-1H-pyrazol-4-yl)-azo]-N,N,N-trimethylbenzenaminium chloride, 3-[(3-methyl-5-hydroxy-1-phenyl-1H-pyrazol-4-yl)azo]trimethylammoniobenzene chloride, 8-[(4-aminophenyl)azo]-7-hydroxy-N,N,N-trimethyl-2-naphthalenaminium chloride, 8-[(4-amino-3-nitrophenyl)-azo]-7-hydroxy-N,N,N-trimethyl-2-naphthalenaminium chloride, 8-[(4-amino-2-  
25 nitrophenyl)azo]-7-hydroxy-N,N,N-trimethyl-2-naphthalenaminium chloride, 7-hydroxy-N,N,N-trimethyl-8-{[2-(methyloxy)phenyl]azo}-2-naphthalenaminium chloride, 3-[(4-amino-6-bromo-5,8-dihydro-1-hydroxy-8-imino-5-keto-2-naphthalenyl)-amino]-N,N,N-trimethylbenzenammonium chloride and N,N-dimethyl-3-[(4-(methylamino)-9,10-diketo-9,10-dihydro-1-anthracenyl]amino}-N-propyl-1-propanaminium  
30 bromide.

8. Agent as defined in claim 6 or 7, characterized in that it contains the other dyes in a total amount from 0.01 to 15 weight percent.

9. Agent as defined in one of claims 4 to 8, characterized in that it contains at least one natural or synthetic polymer or modified polymer of natural origin and that it is in the form of a tinting fixative or dye fixative.

10. Agent as defined in one of claims 4 to 9, characterized in that it is a hair colorant.

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